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PUBLICATION

Refusing to be terrorised: Managing risk after September 11th

by Professor Frank Furedi

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Global Futures

Understanding today to shape tomorrow

Refusing to be terrorised: managing risk after September 11th

Professor Frank Furedi

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Forewords

**Daniel
Ben-Ami**
**Trustee,
Global
Futures**

I happened to be staying with friends in France on September 11th last year. I came back from town to find them uncharacteristically agitated. Something terrible had happened in New York. Planes had crashed into the World Trade Center.

Although I cannot speak French I spent the next few hours mesmerised by the television coverage. The images of the destruction of the twin towers were somehow especially terrible. The sense of shock went beyond the horrific loss of human life that quickly became apparent. The devastation of the World Trade Center also had immense symbolic importance. Indeed it is clear that one of the main aims of the terrorist attack was – as Professor Furedi argues in this discussion paper – to inflict psychological as well as physical damage.

The attacks provoked soul-searching discussions in many arenas. Naturally, there were heated debates on the causes of terrorism and how best to react. Many saw it as a straightforward act of barbarism while other, influential voices argued that global poverty had to be taken into account. Each diagnosis prompted different conclusions about appropriate responses.

Pulling together the strands of discussion on issues such as the impact of September 11th is a key objective of Global Futures. As a charitable research network, its work is focused on the identification of significant new social trends, the exploration of which can bring together more specialised discussions in business, government and universities to the benefit of public debate. Responses to risk have featured increasingly in the profile of Global Futures' projects, and September 11th has brought the issue of risk aversion to the fore.

This discussion paper, and the research and consultation programme of which it is a part, represent a new kind of initiative. The sociology

of risk is not generally considered in the way that risk is discussed by insurers and risk managers. At the same time, the concerns of insurers and risk managers reach wider society only through sensationalised reports in the media or when relevant to policy matters. The aim of this project is to overcome such divisions, not only in the interests of informing public debate, but in the face of decisions about how society handles risk – decisions that have a determining influence on the future security of society.

From this perspective I am confident that Professor Furedi's paper on the response to September 11th is an excellent start. He brings the perspective of a sociologist to problems that are normally the preserve of finance professionals. Although the financial sector has developed sophisticated risk management models he invites it to consider the implications of wider movements in society.

It is important to emphasise, however, that this paper is intended only as an initial step in generating a common dialogue on these issues between different groups. Suggestions about how to take the discussion forward are included at the end of the paper and there are plans to publish response papers later in the year.

Naturally such a project depends on support and funding. The writing, production and distribution of this report could not have happened without both the kind sponsorship of Lloyd's of London and the encouragement and ongoing support from the Association of Insurance and Risk Managers (AIRMIC). The willingness of these organisations to be associated with a project that would inevitably raise some challenging questions for their own industries is to be applauded, and the fact that

they remained confident in the need for an open, ‘bigger picture’ discussion is much appreciated. The ideas and input of the many organisations in government, business and the media which were consulted in the research for this paper were also invaluable.

The shock of September 11th made many feel that the orthodox understanding of the world was inadequate. The publication of this first

discussion paper presents an opportunity to begin to clarify concerns and to recover a sense of where different social developments might lead. While the views expressed in this report are those of the author – not those of Global Futures, its trustees or the sponsors of the initiative – I warmly commend it and look forward to the discussion it will surely provoke.

Daniel Ben-Ami

Writing this foreword some nine months after the appalling attacks on New York and Washington, the Lloyd’s of London insurance market is still coming to terms with the consequences of September 11th.

In the immediate aftermath of the tragedy, it was the emotional impact that dominated. As a major insurer in the United States, Lloyd’s has strong relationships with many New York-based businesses, particularly the insurance broking community. Hundreds of insurance professionals based in the World Trade Center lost their lives that day. When we rang the Lutine Bell two days later in memory of the injured, the dead and the missing, some 3,000 underwriters and brokers filled the Lloyd’s Underwriting Room to pay their respects.

But September 11th has also caused an upheaval in the business of insurance. As Ground Zero smoked and rescue crews struggled through the twisted steel and concrete, insurers wondered whether it would ever be possible to quantify risk in the same way again. The unthinkable had happened. A Pandora’s box of nightmarish possibilities had been opened. Businesses around the world scrambled to protect themselves against the threat of terrorism, while insurers

like Lloyd’s mustered what cover they could to assist their clients.

Now, midway through 2002, insurers have for the most part stabilised their businesses and are turning towards the future. The question facing us: has September 11th changed the world and the insurance industry forever?

Answers will not come easily. Perhaps ultimately, they will only come with the objectivity brought by the passage of time. But the process of seeking to understand must begin somewhere – and Lloyd’s wants to be part of that process.

We believe this is a bold and worthwhile project that is setting out to ask fundamental questions about the way in which society has responded to September 11th. It will also consider the broader issue of how society and commerce in these formative years of the 21st century relates to the concept of risk.

As an international insurer, we believe this project has the potential to be invaluable to our business; as members of society, we believe it could shed light on attitudes that will shape our lives for years to come

Julian James

**Julian
James**

**Director,
Worldwide
Markets,
Lloyd's of
London**

AIRMIC is pleased to be supporting this research project. Its findings are extremely timely and thought-provoking and deserve as wide a readership as possible.

The world of risk has changed dramatically since September 11th and the more information and guidance we as risk managers have to help us

identify and manage it, the safer and more certain we will all be.

We hope this research will cause risk managers everywhere to consider how they can best provide leadership on the issues raised.

David Gamble

**David
Gamble**

**Executive
Director,
AIRMIC**

Executive Summary

Our risk averse culture is dangerous. It is better for the insurance industry to treat some aspects of September 11th as a normal, insurable event, and to discourage societal preoccupation with the idea that it is exceptionally vulnerable.

No-one can doubt that the terrorist attacks on September 11th have weighed heavily on business, politics and society at large. The broad response has been to re-evaluate the threats facing society, their perception and management, and the protection and insurance of assets and liabilities. Specific responses have ranged from new security procedures at airports and monitoring of postal deliveries to premises, to contemplating the relocation of business headquarters and the application of exclusions to terrorism insurance cover. But whether such responses are legitimate or useful is another question – one that has received little evaluation and even less consensus.

Businesses and the public articulate increased suspicion and anxiety about many arrangements and responsibilities that were previously taken for granted: the safety of buildings and workplaces; the ability of airlines to protect passengers; government strategies for protecting infrastructure and responding to threats; the relevance of existing risk planning and avoidance; and the solvency and willingness of insurers in underwriting risks are just some of them. From the perspective of insurance and risk management, this mood of suspicion and intensified vulnerability comes at a time when it is all the more important, both commercially and socially, to evaluate risks effectively. To do this requires a careful and collaborative approach that can rise above the proliferation of rumours and haphazard responses and avoid contributing to the very disruption and anxiety that are the aim of terrorism.

Anglo-American societies feel intensely vulnerable

- *Risks have traditionally been understood as the unintended product of human interaction with the world. The terrorist attacks on September 11th*

have heightened the spectre of ‘intentional risk’, that is the threat of actions with the specific intention of causing damage or disruption.

- *Anxiety about unpredictable threats from malevolent acts, together with the identification of a dramatically expanded range of vulnerable targets, has fed into the existing preoccupation with safety and risk aversion in Anglo-American societies. The intolerance of risk predisposes these societies to a **vulnerability-led response** to the events of September 11th and the ongoing question of terrorism risk.*

There is growing ambivalence about ambition and sophistication

- *There appears to be a tendency to embrace the idea of society under threat and treat it as a welcome organising principle for political and social life. The traditional response that terror will not succeed in preventing us from going about our daily business is less in evidence.*
- *The spectre of intentional risks has led to ambivalence about ambition and fear of sophistication. Aspects of society that have previously been seen as positive – such as prestigious buildings, feats of civil engineering, vibrant business centres, advanced computer networks and modern transport – are now regarded more ambiguously, as potential targets for terrorists.*

Speculation and rumour dominate the post September 11th debates

- *Speculation about unprecedented risks is proceeding with little restraint. Many commercial and single interest lobbies are taking advantage of concern about terrorism to demand special measures or emphasise the danger of hitherto unimagined risks, such as via the food chain, agrochemical industry and nuclear power.*

- Disaster recovery agencies, risk assessment and security firms are also drawing attention to speculative risks to emphasise the importance of their services.
- Speculative risks are adding to business concern about the likelihood of exclusions and higher costs on insurance policies following September 11th. This is accompanied by fears about insurer solvency. For their part, insurers have become anxious about the risks they carry and the accuracy of their clients' assessments of them.
- On both sides of the Atlantic, renegotiations of the responsibilities that fall on government and the markets to underwrite risks are adding to the one-sided preoccupations with increased risk and vulnerability.

Risk aversion creates opportunities for terrorism and hoaxes

- Terrorism represents an asymmetric threat to advanced societies, where the terrorist regards risk-taking from the vantage point of an opportunity, while the very risk averse culture of their target society creates opportunities to cause panic and disruption.
- The impact of the threat of terrorism is often psychological and its power is significantly enhanced by the fears generated by a risk averse culture.
- The risk averse character of our times demands that threats from terrorism and other acts of disruption or sabotage (such as hoax bomb warnings and computer viruses) are subject to an extreme and one-sided risk management response of a sort that generates more problems for the future.

Countering rumour and speculation is a challenge facing risk managers and insurers

- There are important lessons to be learned from the events of September 11th, and some kind of response is essential but, as the anthrax panic showed, overreaction and speculation about threats are disabling to a reasoned risk management response and inhibit good planning.
- The risk management sector needs to find ways to discourage speculation and emphasise the capability of response if it is to maintain stability in the negotiation of risk management strategies, including insurance.
- It is better for the insurance industry to treat some aspects of September 11th as a normal, insurable event, and to discourage societal preoccupation with the idea that it is exceptionally vulnerable.
- If the ability to cope with and learn from intentional risks is not accepted, there is likely to be a deterioration in the relationships between insurers and risk managers and, more broadly, society's ability to respond to risks in a preventative and measured way. Businesses will become more distracted by the unknown future, spending money to cocoon operations and putting plans on hold.
- More brutally, the one-sided tendency to emphasise vulnerability rather than resilience is itself likely to encourage attacks and hoaxes. Our risk averse culture is dangerous, because it ensures that large-scale disruption, reorganisation of resources and fear and confusion are the rewards for terrorists.

1 Introduction: the impact of September 11th on risk

'The world has changed forever'

'Nothing will be the same after September 11th'

Throughout the world, the destructive events of September 11th, when attackers hijacked four aeroplanes and crashed three into urban centres, have been represented as the end of an era and the beginning of a new and highly dangerous chapter in human history. According to some experts, when terrorists destroyed the World Trade Center (WTC) in New York, not only did the world become a more hazardous place, but the meaning of risk changed. As the CEO of CNA Financial Corporation put it, 'the events of September 11th have changed the very definition of risk'.¹ For others, the attacks have demonstrated a scale of impact that is not anticipated in current risk strategies and insurance cover, and which makes them think very differently about how to protect operations, buildings and people in the future.

Claims about the world historic importance of September 11th are easy to understand.

Television images brought home to everyone the awesome scale of destruction that can be inflicted on a modern society by a small number of zealous individuals. Almost overnight people became sensitised to a new form of danger, one that was both secretive and random but also purposeful in that it consciously sought to inflict dread and destruction on its targets. Whether or not the images of September 11th will stay for long in the imagination is far from clear.

However, its impact on the way that we perceive risk and organise our societies has been quite profound, and this is largely the subject of this discussion paper.

The WTC attacks also had a serious economic impact, both in terms of direct losses and indirectly through the cancelled orders and business pessimism that formed part of the response. Some estimated it to be the most serious insurance event of all time, predicting losses of between \$30 billion and \$100 billion,²

but these are based on including some very indirect claims of loss. Tourism, hotels, aviation and the aerospace industry have borne the brunt of the economic impact of September 11th. In the aftermath of the event, major redundancies were announced in the UK, European and US airline industries and aerospace sector.³ For a brief period retail sales dropped and the stock market fell sharply. The ripple effect of the impact has caused problems for companies and organisations that had no immediate connection to the targets. For example, the stationer WH Smith estimates that the incident cost the company nearly £40 million since its 200 airport shops and 400 hotel outlets in the US experienced a sharp decline in traffic in the aftermath of the attacks.⁴

However, despite the worst fears, the global economy has proved to be remarkably resilient, suggesting that the post-attack projections were overly pessimistic and that cuts were, at least partly, based on the coincidence of the attacks with other economic shifts such as rationalisations already underway, especially in the telecom and travel sectors. The impact of September 11th on business and consumer confidence was significant but relatively modest and short lived. So although share prices fell in the aftermath of the disaster, within a month the Dow Jones Industrial Average had returned to its pre-September 11th level. Paradoxically, during the three months of October to December, the US economy actually grew,⁵ helped in no small measure by the release of funds from the Federal Reserve Board to bolster the financial markets and the fiscal boost from increased state spending. In the UK, business confidence swiftly recovered and most sectors of the economy reported that they had managed to weather the storm.⁶

¹ Bernard Hengesbaugh cited in *Insurance Day*, 6 November 2001

² 'US terror claims may hit \$100bn', *Sunday Times*, 16 September 2001

³ 'Job cuts hit aviation and aerospace industries', *European Industrial Relations Observatory On-line*, www.eiro.eurofound.ie/2001/10feature/UK0110114F.html

⁴ *The Times*, 18 April 2002

⁵ R. Gittins, 'Beware the bust after a generals' boom', *The Age*, 13 March 2002

⁶ 'Job prospects positive for telecomms sector: Manpower survey predicts optimistic job outlook for telecommunication industries', *M2 Presswire*, 1 April 2002

Nevertheless, the quick 'recovery' has not left economic life unchanged. It reinforced a heightened and continuing sense of business uncertainty. The attacks are continuing to raise important questions about security and the management of risk. Private sector bodies and companies have started taking action to reduce the potential impact of terrorism. Insurance companies, which are in the business of pooling the risks faced by individuals and enterprises, are confronted with the dilemma of how to respond to the post-September 11th environment. An unprecedented catastrophe like this sends a 'signal that the world might have changed and that the kinds of losses that will occur in the future may be different from what happened in the past'.⁷ Risk managers, particularly in large organisations, are confronted with assessing the insurance needs and management strategies for responding to the possibility of further terrorist attacks.

Since last September, an ever growing part of social and economic life has been reorganised around a heightened sense of security consciousness. These include:

Travel security measures

Anyone who is regularly involved in travel has become familiar with new security measures that involve longer check in times at airports. Other forms of public transport, such as Eurostar, have also seen the tightening up of security arrangements.

Increased building security

Many companies and organisations have chosen to increase security surveillance and guards in office buildings; and monitor the movement of people in buildings and workplaces. Identity card systems are being reviewed, enforced or introduced.

Delivery and mail security

Deliveries to companies are more frequently vetted. At New York's Waldorf-Astoria Hotel X-ray machines, once brought out only to protect visiting dignitaries, are now used to scrutinise every delivery, from bed linen to food. In some organisations, handling mail is now

defined as a significant risk and new procedures have been introduced in corporate mailrooms to address the threat posed by contaminated letters or packages.

Protection of records and data

Considerable resources are now devoted to the protection of vital business records, with new schemes being introduced to disperse and back up crucial information. Some predict that September 11th will give a much needed boost to the web hosting industry.⁸ As one British executive commented, 'a lot of money will be spent on data protection'.

Activity dispersal

Tall buildings are now being regarded by some as unattractive work venues and some companies, particularly in the financial sectors where there were close ties to the companies in the WTC, have started to explore the option of dispersing their activities.

Alongside these concerns, the US, Britain and to a lesser extent other European countries, have seen a rapid growth in agencies and experts offering to 'risk assess' organisations from the perspective of these particular concerns. Public relations, crisis management and security companies have repackaged their services to develop the new market that was created when the September 11th attacks alerted the well-insured and the comprehensively risk managed that they might yet be at greater risk than they thought. Disaster recovery agencies in particular have been actively promoting their services.

The problem with these developments is that they are accumulating to form a reaction to September 11th that may be unjustified. The risk management services have every interest in exaggerating the risks that accord with their particular specialisms; political lobbying for government intervention on terrorism risk inevitably means putting a one-sided case; and there is an acknowledged tendency to link economic and business changes to September 11th. The resulting impression, in politics and industry but also across society, is that September 11th represents the emergence of threats beyond the capabilities of traditional risk management,

⁷ R. Hogarth, 'Insurance and Safety After September 11th; Has the World Become a "Riskier" Place?', Social Science Research Council, www.ssrc.org/sept11/essays/hogarth.htm, 2002

⁸ 'Are we set for a Web hosting reprise?', *The Register*, 1 May 2002

beyond existing systems of insurance and beyond our social resilience. The danger is that, in addition to being often untrue, this outlook will limit society's capacity to respond to such risks and will supplant balanced risk management with acting on fears and insecurities.

1.1 The risk of achievement

After the destruction of the WTC, apprehensions have been expressed about the security threats faced by buildings and projects that symbolise power and national identity. One survey of the property managers in 50 of the UK's top 250 companies indicates that the future of the 'prestigious, city centre HQ building' may be under threat. Over half (52%) who presently occupy such prestigious buildings said that they were worried about their safety. For those whose buildings were located in London, this figure rose to 67%. A large proportion of people surveyed indicated that they were unhappy about working in tall buildings and 'thought that having an HQ located in a central business district put them at greater risk of terrorism'.⁹

It is not just tall buildings, but also other symbols of economic power and success that are seen to be in the firing line. It is feared that well known brands like Coca Cola, McDonald's and Starbucks have the potential for attracting the attention of terrorists precisely because they are widely recognised. Executives in large corporations such as Credit Suisse, Shell, Nestle, AXA and IBM are very much aware that they feature in the frequently quoted claim that 51 of the world's top 100 economic entities are corporations, and as such are potentially targets over broader global political issues, alongside powerful countries.

Successful economies feel particularly vulnerable to a terrorist attack precisely because they have a lot to lose. Economic success is embedded in a complex division of labour that pools together talent and know-how, while reaching out to other sectors and regions of excellence and skill. That is why dynamic urban centres have high population densities and wealth is concentrated in the leading centres of economic activity. This

concentration of wealth is also associated with high levels of insured assets.

From the standpoint of progress and social development, concentration of economic activity makes perfect sense. As Thomas Homer-Dixon notes: 'Placing expensive equipment and highly skilled people in a single location provides easier access, more efficiencies, and synergies that constitute an important source of wealth'.¹⁰ These benefits seem obvious.

However, from the standpoint of security, they become less so. The concentration of economic activity, of high value assets in small locations, also means that even a relatively small attack can lead to a major disruption of business life. As a recent study by Swiss Re argues, 'the size, complexity and vulnerability of certain targets – such as densely overbuilt downtown areas or economic centres – enable perpetrators to achieve staggering consequences with relatively simple but concentrated attacks'.¹¹ In essence, by beginning to organise social and business life from this standpoint, a central principle of modern economic life is being overturned.

Ironically some of the new security measures being proposed can compound this problem. If the major companies in a region host their servers in half a dozen 'secure' Internet hotels, this provides half a dozen prime targets through which to effect widespread disruption.

Major celebrations and events are increasingly seen as being at risk of a terrorist attack. For the officials in charge of the FIFA World Cup in Japan and South Korea, the problem of the football hooligan pales into insignificance in comparison to apprehensions about a potential terrorist outrage. Organisers of high profile events are now forced to assess their vulnerability in these terms. In Manchester, a group of council building control experts, called Core Cities, is busy reviewing procedures to counter a biological or chemical attack at the main stadium and 16 other buildings that will host the Commonwealth Games later in 2002. One suggestion under review is to install 'banks of decontamination showers to treat spectators after a chemical attack'.¹²

⁹ J. Higginbotham, 'Networking - Is it time to relocate?', *Accountancy Age*, 28 March 2002

¹⁰ Thomas Homer-Dixon, 'The Rise of Complex Terrorism', *Foreign Policy*, January-February 2002

¹¹ Swiss Re, 'Natural catastrophes and man-made disasters in 2001: man-made losses take on a new dimension' *Sigma*, No.1, 2002, p.17

¹² T. Broughton and Andy Pearson, 'Bioterror, the threat to Britain's landmarks', *Building*, 15 March 2002

With hardly any debate, the idea that most major landmark sites are a potential terrorist target has crept into common consciousness. Risk assessment specialists are drawing up scenarios and assessments of a bewildering range of heritage landmarks, sporting venues and prestige buildings. These include Canary Wharf, Durham Cathedral, Newcastle United Football Club ground at St James's Park and the Wimbledon tennis complex. At the same time, a government unit called the Disaster Assessment Group is examining how buildings can be made more accessible for fire brigades, and the Department for Transport, Local Government and the Regions (DTLR) is preparing changes to building regulations in the light of the September 11th attacks.¹³

The random, secretive and particularly indiscriminate character of terrorism has strengthened the conviction that any aspect of public life can be threatened. This is why the American President's Commission on Critical Infrastructure Protection identified so many potential targets (*McKenzie, 2000*). These are:

- *The transportation infrastructure*
- *The oil and gas production and storage infrastructure*
- *The water supply infrastructure*
- *The emergency services infrastructure*
- *The banking and finance infrastructure*
- *The electrical power infrastructure*
- *The information and communication infrastructure*
- *The government infrastructure*
- *Defence infrastructure*
- *The population*

Although this kind of assessment is intended to provide advanced societies with greater security, official warnings about new areas of vulnerability often create greater anxiety. For example, press reports about the possibility of terrorists using crop-dusters to conduct biological or chemical warfare had the effect of reinforcing public fears following the September attacks. 'Practically everyone has been scared

stiff' noted a reporter at *The Washington Post*. With so much of that which underpins our everyday life included on the target list, vulnerability could be viewed as defining the very character of our existence. Unfortunately, such a profound sense of vulnerability may force us to reorganise our lives far more than is warranted by the risk of terrorism.

1.2 Insurance in the spotlight

The perception that just about every section of the economy has now become a potential target informs the day to day affairs of many businesses. Such concerns are particularly intense for those who own, run or manage potential prestige targets, and those responsible for looking after these assets. Often, managers of prestige targets have discovered that insuring property has become prohibitive. The New York Metropolitan Transport Authority recently reported that premiums for insuring its subway and seven bridges has more than tripled from \$6 million to \$20 million. The rise in the price of premiums has been accompanied by a decline in the value of the cover. The old policy gave the New York Metropolitan Authority \$1.5 billion of coverage whereas the new one provides only \$750 million.¹⁴ For similar reasons, the authorities responsible for managing the Golden Gate Bridge in San Francisco have opted out of terrorist cover. The best insurance offer they received would have provided them with \$100 million coverage – a tiny proportion of the estimated \$2.1 billion required to rebuild the bridge. Perhaps they feel confident that the government would intervene to restore such a landmark in the event of attack, but others cannot be so secure in opting out of terrorism cover.

In March 2002, the credit rating agency Moody's indicated that the lack of adequate terrorism cover for large properties had become an area for concern. It observed that for large, trophy buildings, and for office towers of over 50 stories in central business districts, 'terrorism coverage was very difficult to obtain; and if available, it was almost prohibitively expensive'. According to Moody's analyst Daniel B. Rubock, the agency is not considering any

¹³ 'Landmark buildings face terror risk assessment', *Reuters*, 8 March 2002

¹⁴ 'Targets pay more for less insurance', *The Guardian*, 16 April 2002

downgrades of corporate bonds in the immediate term, but it is continuing to evaluate the cost and conditions of cover being made available by the insurance industry: 'in the intermediate term, however, we will be looking closely at a limited number of high-profile buildings to determine what effect a lack of terrorism insurance may have on ratings'.

The US government's General Accounting Office (GAO) has reported that many businesses, especially those with a high concentration of employees or those located in perceived target areas, are unable to find 'a meaningful level of terrorism insurance at an economically viable price'.¹⁵ The GAO is also concerned that property companies and commercial lenders have been significantly affected by the inability of some properties and businesses to find insurance against acts of terrorism and that this could act as an economic drag as banks and other funding agencies hold back from large-scale projects where cover is in question. In Britain too, cover for property damage is a concern of developers: insurance cover is in many cases the facilitator for large projects where few would want to carry such high risks themselves. Limits on such cover have implications for all large-scale, infrastructural projects that involve complex collaboration between many parties. 'Insurance has two roles – as a rebuilders and as an enabler,' according to David Gamble, Executive Director of the UK-based Association of Insurance and Risk Managers (AIRMIC), 'Its rebuilding role is well-known: whenever there is a disaster, people turn to insurers for assistance in rebuilding what has been lost. The enabling role is more subtle, yet equally important. When people consider an investment they prefer not to take on all the risks associated with it; for example they may want to reduce exposure to credit or currency risks as well as protecting the physical assets they are investing in. Insurance enables this and if it is absent or insufficient then, over time, smaller and probably fewer investments will be made. Our economic prosperity is due in no small part to the availability of appropriate insurance.'

The information technology sector has also complained that insurance cover for key areas of

its services has shrunk away amid concerns about the activities of terrorists and activists. D. K. Matai, the chief executive of mi2g, claims that in the aftermath of September 11th many global insurance providers rewrote their terms and conditions to specifically exclude cover for data and digital liabilities.¹⁶ At a time when IT firms are grappling with the threat of viruses and hacker attacks, they face the new problem of operating without effective business disruption or disaster cover in place.

In Britain there have been many complaints about the rising cost of insurance premiums. The Engineering Employers' Federation (EEF) has warned that the increased cost of insurance could delay the recovery of Britain's manufacturing sector. A sample of 80 EEF members indicated that, in addition to a 60% rise in general and property insurance, there has been a 40% increase in premiums for product liability and employers' liability insurance.¹⁷ These broader problems of cover and cost are seen by many to result from a general conservatism in the insurance industry in the face of any act of disruption, which is being attributed to the impact of September 11th. An example of this was the closure of Yarl's Woods detention centre at the end of March following riots. The closure was blamed on the difficulty of finding an adequate level of insurance. According to the security firm Group 4, the 'cover that insurers were prepared to pay was considerably reduced and not considered adequate'.¹⁸

Insurers and reinsurers contend that they cannot accurately estimate the cost and risk of terrorist attacks. In addition to this, the competitive tendency to drive down premiums means that there is a gap between the risks being assumed by insurers and the premiums they are collecting. September 11th has made insurers more aware of the risks they are carrying, in all areas. Consequently they have been shifting the burden onto policyholders through higher premiums and reduced coverage. The financial losses suffered as a result of September 11th have led some insurance companies to the conclusion that terrorism is uninsurable. As the Swiss Re report argues, 'the attacks demonstrated that this

¹⁵ B. McKenna, 'Congress warns of "economic drag" from lack of terrorism insurance', *Insurance Com*, 28 February 2002

¹⁶ 'Insurers leave IT in lurch', *Computer Weekly*, March 2002

¹⁷ 'Industry calls for help to counter rise in insurance', *Financial Times*, 25 March 2002

¹⁸ 'Yarl's Wood shut down', *BBC News-online*, 1 April 2002

type of threat has become virtually immeasurable in terms of both the severity and frequency of exposure – making it difficult for the private insurance industry to adequately cover [sic] this risk’.¹⁹ This standpoint is also echoed by Rodger Lawson, the President of the Alliance of American Insurers, who stated that ‘terrorism is an uninsurable act – one that only the government can ultimately be responsible for as the insurer of last resort’.²⁰

In both the US and the UK, the precariousness of terrorism cover in the weeks following the September attacks led to political and commercial demands that government – that is the tax payer – becomes the insurer of last resort. Since those initial reactions, the crisis in cover has not been so profound as first predicted, but the concern about a shortfall is still significant enough that the US Senate is heading towards passing a terrorism insurance bill, which would place the burden of paying for a major terrorist attack on the government.²¹ For insurers in Britain, with longer experience of addressing terrorist risk, it is puzzling that the US does not have a system for pooling such risks along the lines of the British Pool Re mutualised fund, which covers terrorism exposure for property damage and business disruption. While September 11th has raised the issue of high levels of victim compensation claims, which would not be covered by the Pool Re system anyway, debates in the US Senate about terrorism insurance indicate that much of the concern to establish a government role in insurance cover is politically driven rather than the only practical option. Naturally, many corporations and insurance firms are keen to support this political interest in providing exceptional cover. However, the longer term view is that Pool Re is the best model for achieving stability, and it is currently being considered within the EU for all member states.

However, the Pool Re system in Britain is supplemented by a range of additional products from private insurers providing excess terrorism cover, and cover for employer and public liabilities for special high-risk circumstances. This means that insurers’ exclusions do still have a big impact on organisations’ cover. One area

of concern on both sides of the Atlantic is the effect of new exclusions on business interruption cover. Since September 11th, compensation for lost revenues is under question where the sources of disruption might be terrorism-related, such as hoax threats. According to David Ireland, Group Insurance Director of VINCI plc, a complicating factor in the UK is the definition of terrorism: ‘Pool Re, the government-backed insurer of last resort for covering property damage and business interruption, defines terrorism very narrowly, whereas insurers’ exclusions more closely follow the Terrorism Act 2000 definition, which includes people, or individuals, acting for religious or ideological reasons. This means that many organisations could have a challenging gap in their cover.’

It is understandable that there is some reluctance in the insurance industry about providing terrorism cover, particularly as the damages that victims could collect remain unlimited. Insurance companies are also attempting to exclude other kinds of claims through expanding the meaning of terrorism. In the US, some insurance companies have sought to widen the definition of terrorism to the point where virtually any malevolent act could be encompassed by it and thereby excluded from cover or subject to restrictions. Take the proposed definition sought by one Washington State insurance firm:

‘terrorism means the use or threatened use of force or violence against person or property, or commission of an act dangerous to human life or property, or commission of an act that interferes with or disrupts an electronic or communication system, undertaken by any person or group, whether or not acting on behalf of or in any connection with any organisation, government, power, authority or military force, when the effect is to intimidate, coerce, or harm a government, the civilian population thereof, or to disrupt any segment of the economy’.

According to this definition, the damage caused by a disgruntled customer becomes equated with that caused by a hijacker. Even the

¹⁹ Swiss Re, *op cit*, p.16

²⁰ ‘President’s message on terrorism insurance on target; AAI urges Senate to act’, *Insurance Journal*, 10 April 2002

²¹ Consumer Federation of America

definition of terrorism proposed by the American Insurance Services Office (ISO) is likely to foster a climate of confusion. According to the ISO, terrorism means:

‘activities against persons, organisations or property of any nature that involve the following or preparation of the following:
a) use or threat of force or violence; or
b) commission or threat of a dangerous act; or
c) commission or threat of an act that interferes with or disrupts an electronic, communication, information or mechanical system’.²²

Terms like ‘dangerous’ are extremely imprecise and a ‘dangerous act’ could mean anything from running with a broken bottle to sending anthrax spores through the mail.

The debate about the definition of terrorism is far from resolved. But if every act of sabotage or a hoax or an act dangerous to life becomes defined as an act of terrorism, and cover for it becomes excluded, many businesses will be forced to find new ways to manage this risk. And it is not only insurance companies who are worried about their clients; many corporate risk managers are worried about the long-term solvency of their insurers in the face of terrorism risk. In a recent survey of American risk managers, 95% of the respondents indicated that insurer solvency was one of their biggest concerns.²³ Similar concerns are evident in the UK. According to Andrew Cornish, Risk Manager at Colt Telecom Group, insurer solvency is a key issue: ‘There were already concerns about big insurer losses before September 11th and they are increasing. The result is greater interest in insurers’ history, balance sheet and reinsurance protection, and possibly a flight to quality insurers, even if it means higher costs. Whether this is a sensible reaction is debatable.’ It is unlikely that these issues will be resolved very easily. As Jeremy Pinchin, Special Council for September 11th at Lloyd’s of London, points out: ‘The fact that there are ongoing arguments about the size of front-end losses inevitably contributes to uncertainty about the impact on insurers.’ However, the popular punditry about the

insurance industry being overwhelmed has little relationship to the way in which it might absorb losses and respond.

In the meantime, all this mutual anxiety threatens to produce a deterioration in relationships between insurers and their clients, and at a time when greater care and collaboration is needed to determine the ways that insurance, risk management and government policy should respond to September 11th.

1.3 Speculative risk

An understandable preoccupation with the question of where the terrorist is likely to strike next has led to considerable resources being devoted to constructing scenarios and locating potential sources of vulnerability. The fear that no area of social life is immune from the threat has encouraged officials and experts to try to minimise the possible impact of a terrorist attack. In an uncertain world the threat from terrorism endows uncertainty with new meaning. If an aeroplane can be turned into a flying bomb that kills several thousand people, what is to stop other benign technologies from being turned into weapons of destruction? Unfortunately, deliberations on the hazards posed by terrorism can easily lead to a massive inflation of the dangers facing society.

Anxiety about the risk posed by today’s terrorists is shaped by the conviction that these actors are capable of doing anything. As recent experience with suicide bombers shows, there are people who have little inhibition about the consequence of their action. But whether these individuals’ capabilities are unlimited is another matter. Whilst their determination is not in doubt, they are far from omnipotent. The unpredictable character of terrorism has become synonymous with the belief that we are surrounded by threats.

Paradoxically, the development of a mature, complex, technologically sophisticated society is often represented as powerless against the actions of small groups of old fashioned zealots. It is sometimes claimed that it is the success of Western economies that makes them so

²² S. Massmann, ‘Terrorism exclusion wording unclear’, *Insurance Newsnet*, 11 February 2002

²³ Cited in L. Widmer, ‘A New Symphony of Risk’, *Risk & Insurance*, January 2002

intensely vulnerable to terrorist risk. According to one account, vulnerability is the product of growing complexity and interconnectedness.²⁴ An effective response to the risk of terrorism needs to be based on balancing elements of resilience with those of vulnerability. In this way, measures designed to protect the public can coexist with the taking of initiatives to reduce risks. Contemporary culture finds it difficult to maintain this balancing act. As a result, *responses to new risks are vulnerability-led*. The tendency to approach the threat of terrorism from the standpoint of vulnerability encourages an attitude of pessimism, dread and foreboding towards this risk. Instead of asking the question of ‘what do we know’, we prefer to speculate and ask the ‘what if’ question:

*What if they
contaminate the milk
supply?*

*What if a train
carrying nuclear fuel
is hijacked?*

*What if a toxic
biological substance
infects the water
supply?*

*What if a chemical
factory becomes a
terrorist target?*

*What if a bomb
destroys the Severn
Bridge?*

Perceptions of vulnerability have a free-floating character that attach themselves to a wide variety of phenomena. Since September 11th, the vulnerability-led approach towards risk has acquired formidable momentum. That is why there is so much mental energy devoted to the exploration of speculative risk. ‘Corporations must re-examine their definition of risk and take seriously the possibility of scenarios that only science fiction writers could have imagined possible one year ago’, argues a leading economist at Zurich Financial Services.²⁵

Many previously untroubled aspects of life have been transformed into a speculative risk. Recently, there have been scare stories about the

threat of an outbreak of a smallpox epidemic, for example, of bio-terrorists infecting food supplies and water-reservoirs. Leading American consumer activist, Ralph Nader has warned that if an aeroplane were to hit a nuclear-power station the subsequent meltdown could contaminate an area ‘the size of Pennsylvania’. But the most imaginative storyline came from the Washington-based Worldwatch Institute. It raised the alarm about the ‘Bioterror in Your Burger’. This Institute believes that meat-processing plants are particularly vulnerable to attack and warns that terrorists could contaminate a huge amount of store-ready meat with a strategically placed sample of species like E. coli, salmonella or listeria. Such an idea is not supported by any evidence of intent, and it bears so little relationship to the reality of how meat is packed and consumed that a terrorist pursuing it would be unlikely to succeed in terrorising people anywhere near as effectively as the Worldwatch Institute can by briefing the media in this way!

In Hollywood, while there has been great sensitivity among directors about being seen to cash in on September 11th, Hollywood’s creative imaginations (and those least constrained by reality) have been sought out by the US army for help in waging the anti-terrorist campaign. Since September 11th, senior military personnel have held discussions with film makers, dreaming up scenarios of possible future terrorist attacks. American intelligence specialists have also sought advice on managing terrorist attacks from Hollywood moviemakers. Die Hard screenwriter Steven E de Souza and Delta Force One and Missing in Action director Joseph Zito were amongst those attending the brainstorming sessions. Robert Lindheim from the Institute of Creative Technologies (ICT) observed that the military ‘wants to think differently’. ‘The reason I believe the army asked the ICT to create a group from the entertainment industry is because they wanted to think outside the box’, claimed Lindheim.

Post-September 11th speculative risks are often based on the premise that normal hazards can be turned into an even more destructive force through the action of terrorists. Consequently

²⁴ Thomas Homer-Dixon, ‘The Rise of Complex Terrorism’, *Foreign Policy*, January-February 2002

²⁵ David Hale, ‘Insuring a Nightmare’, *Worldlink*, 19 March 2002

many threats to society are seen as potential weapons that terrorists may deploy. Take the perception of the threat posed by the outbreak of foot and mouth disease in Britain. In September 2001, Sir William Stewart, a former government chief scientific advisor warned that the difficulty that the Government had in dealing with the foot and mouth outbreak indicated just how vulnerable Britain was to any future threat from biological warfare (BBC Online, 2001). The ease with which Sir William made the conceptual jump from the crisis of British farming to the spectre of biological warfare demonstrates how the contemporary sense of vulnerability helps transform difficult problems into a potential source of asymmetric threat. This point was echoed in a recent report published by the Select Committee on Defence. The report stated that the 'recent foot and mouth epidemic has demonstrated [that] controlling the spread of some viruses is very difficult' and this 'may suggest that the threat of biological attack is more serious' (Select Committee on Defence, 2001, paragraph 68). Subsequently, other commentators and officials have echoed the view.²⁶ The Department for the Environment, Food and Rural Affairs (DEFRA) and the Foods Standards Agency (FSA) were charged with reviewing 'the measures in place to combat terrorism'. DEFRA appears to take a balanced view of this risk and noted 'that both the water and food supply is very diverse which makes them poor targets for terrorists'.²⁷

The way in which traditional concerns with food safety have become the vehicle for the promotion of post September 11th speculative risks represents an important development. Last autumn, both houses of Congress rushed through legislation to improve food safety in response to the threat of bioterrorism. The food industry, which was traditionally hostile to the expansion of the regime of inspection, was far too embarrassed to oppose the bill publicly. Advocates of the legislation were able to occupy the moral high ground and link their traditional concern with food safety to the argument that the food supply was vulnerable to contamination by terrorists. 'The events of September 11th are

being used to justify a whole regime of food regulation', argued a lobbyist for the National Food Processors Association.²⁸

Since last September, the pursuit of an argument or a claim through the prism of security will readily gain a hearing. That is why many critics of corporations and other advocacy groups are also linking their traditional objectives to alarmist warnings about potential terrorist threats. Many environmentalist campaigns contend that the way to avert this danger is by adopting their goals. The Worldwatch Institute's statement on 'Bioterror In Your Burger' notes that although past attempts to clean up America's food chain has 'failed to inspire politicians', a patriotic demand for homeland security could 'finally lead to meaningful action'.

Friends of the Earth and Greenpeace have always opposed the building of a new nuclear reprocessing plant in Sellafield, England. When the High Court took the view that the British Government's decision to give British Nuclear Fuels the go-ahead for the MOX plant at Sellafield was not unlawful under European law, both of these campaigning groups claimed that the new facility would, 'increase the risk of terrorists seizing nuclear material'. Stephen Tindale, Executive Director of Greenpeace UK, called on Prime Minister Tony Blair to take seriously the threats from international terrorism and ensure that 'his Government stopped allowing activities that will arm the terrorists of tomorrow'. Some environmentalists have gone a step further, to argue that their programme offers the most effective counter-terrorist strategy of all. This was the view proposed by David Corn, the Washington editor of *The Nation*. Writing in the online journal *OnEarth*, Corn observed that 'technologies long challenged by environmental advocates are potential sources of immense danger in an era of terrorism'. He added that 'environmentalism will have to be an essential component of counter-terrorism'.

Under the guise of the war on terrorism many parties are pursuing their own agendas. One outcome of such special pleading is likely to be

²⁶ *Ananova* 2001

²⁷ 'DEFRA meeting with Consumer Organisations', *Consumer News*, 18 April 2002, www.nfcg.org.uk/ConsNews/cn207p17.htm

²⁸ 'Industry's resistance stalls bid to protect food', *The New York Times*, 16 April 2002

the sowing of confusion and the intensification of suspicion within the wider public about the relative significance of alleged threats. It will also make it difficult for the insurance and risk management sectors to update their realistic disaster scenarios effectively. Interestingly, in Europe businesses have not engaged in such special pleading since the early weeks following the WTC attacks, and this may well be because they are more mindful of the need to renegotiate insurance contracts on favourable terms, whereas some sectors in the US perceive scope for politically backed economic concessions on insurance and therefore have an interest in projecting more imaginative disaster scenarios.

Speculative risks are not the same as theoretical risks. Faced with uncertainty, theoretical risks are oriented towards exploring the probabilities and impact of a hitherto unknown hazard. Speculation is not so much the theoretical exploration of the unknown but an exercise of the imagination. Of course many of the risks we now face are difficult to evaluate with precision because of a lack of previous experience with them. Unfortunately, speculating about the scope of possible destruction seems irresistible.

There are a number of problems with speculating about scenarios with no precedent. Most obviously, it is highly subjective, rather than based on what is objectively known about the relative incidence of attacks today, their source and nature. Even if the existing stock of knowledge is minimal, it is far better to rely on this and maximise the direct lessons of experience. Take the recent experience of the anthrax postal campaign in the US. Until these attacks, medical science had a mistaken notion of the risks posed by exposure to anthrax. It appears that scientists overestimated the death rate for those infected and had little idea about how many spores a person needs to inhale to develop the disease.²⁹ Important lessons have

now been learnt about the way that anthrax spreads and the threat it represents and we are now in the position of reducing the risk of exposure to it.

The prevailing sense of vulnerability towards the unexpected not only leads to the proliferation of alleged threats but also expands the range of potential speculative risk. From this perspective hazards have the potential for becoming a weapon in the terrorist's armoury. Threat assessment of terrorists necessarily involves an element of second-guessing. However, the prevailing climate of risk aversion leads to the continuous identification of areas of potential vulnerability before they become targets. So, for example, sections of American agribusiness have become preoccupied with the danger of 'agro-terrorism', arguing that US agriculture is vulnerable to acts of biological warfare. 'Given the tremendous economic, political, and strategic value of U.S. agricultural resources, the Washington policy community has been slow to realise their vulnerability to attack' warns Jonathan Ban of *The Chemical and Biological Arms Control Institute* (Ban 2000).

If more parts of society are treated as a potential target and if communities are overly sensitised to potential vulnerability, it will become increasingly difficult to find ways of managing the real threats.

The steady stream of scare stories threatens to undermine public morale and inadvertently present the terrorist with a psychological advantage. It is always worth remembering that the objective of the perpetrators of September 11th was not mainly material but psychological destruction. Those who are thinking of cashing in on people's anxiety about their security, or even unintentionally exacerbate it, would do well to think twice in case they thoughtlessly play into the hands of the real beneficiaries of a climate of fear.

²⁹ 'Anthrax Mistakes Offer Guide to Fight Next Bioterror Battle', *The New York Times*, 5 January 2002

2 The growing focus on Intentional Risk

The construction of new speculative dangers indicates that thinking about risk management is undergoing an important transformation. Most studies of risk are oriented towards the exploration of global uncertainty and the unknown. They have little to say about circumstances where individuals have an explicit agenda of intentionally threatening the health and safety of the public. Until recently, public discussion focused on risk as a side effect or unintended outcome of innovation and change. In such instances the damage is caused by developments that are on the whole beneficial to society, such as new buildings, transportation, medical intervention and fuel supplies. In the case of intentional risk, damage and destruction are the direct objective of the actors. Since September 11th, whether they like it or not, risk managers are forced to address questions posed by intentionally aimed threats.

Traditionally, huge losses and massive disruptions are the consequence of natural catastrophes or man-made disasters. The insurance industry has provided cover against terrorism, sabotage, kidnap and product contamination, but such intentional and purposively inflicted hazards – outside the domain of war – have historically resulted in relatively small losses that are spread out over long periods of time.

However, with the growing complexity and interdependence of social and economic life, it is feared that intentional risks could impose a far more formidable cost on society. The potential cost in the domain of information and communication technology has been widely discussed. Cyber attacks, especially the spreading of viruses, can exact significant costs. The estimated economic cost of the Code Red computer worm was around \$2.6 billion, making it one of the most serious insurance events of 2001.³⁰

Terrorism is one of the most unpredictable and costly forms of intentional risk. Experience shows that its effects in some respects resemble that of a natural catastrophe. As Swiss Re's report *Natural catastrophes and man-made disasters in 2001* observes, 'in both cases, enormous inherent loss potentials make **diversification** difficult to achieve; individual events can affect entire economies and many different lines of insurance business'.³¹ However, there is one crucial difference between natural catastrophes and the intentional risk posed by terrorism; 'unlike terrorist attacks, natural hazards occur randomly and without intent, and their probabilities and consequences can be modelled with scientific data and methods'.³²

The character and outcome of a terrorist incident is more difficult to calculate and model because it has an intrinsically **subjective** element. An incident like September 11th can transmit the signal that the world has changed and that the patterns of losses and the character of risk has changed. The very perception that we live in an uncertain world can unleash a chain of responses in communities, politics and international relations, whose consequences are difficult to predict. Moreover, the fear induced can actually encourage the growth of intentional risk. It creates conditions where reactions to threats will be significant, disruptive and command resources (such as mass evacuations, transport disruption, cancellation of political visits, large expenditure on security and so on), and this in turn creates possibilities for invoking that disruption. That is why at least from the psychological, cultural and economic point of view, an anthrax hoax is potentially as dangerous as a genuine attack. How satisfying it must be for any misguided individual that a contaminated parcel can cause chaos not just in the recipient organisation, but among all

³⁰ Swiss Re, *op cit*, p.6

³¹ *ibid*

³² RAND, 'Stress Reactions to 9/11 Felt All Across The Country', News Release, 14 November 2001

organisations who have speculated about their vulnerability to attack, and among the public at large.

The fear of intentional risk can be significant since the public is keenly sensitive to the dramatic consequence of a terrorist event. Many toxic substances associated with terrorist acts are not particularly effective methods for causing mass physical casualties, 'yet its mere presence can terrorise a nation and expend a high toll in human and financial resources'.³³ Consequently, even hoax warnings can have a destructive impact on day to day social and economic activity. For example, an anthrax scare led to mayhem in Toronto on February 2nd 2002. Surveys carried out in the aftermath of September 11th indicate that close to half of American adults (44%) and more than a third (35%) of children reported having one or more substantial symptoms of stress in the aftermath of the event.³⁴ Within weeks of this incident, there were reports of a variety of new illnesses experienced by people, which were blamed on toxic exposure. Over 2,300 false alarms about anthrax occurred during the first two weeks of October 2001, many of them involving socio-genic symptoms. Apprehensions towards intentional risk can exact a heavy burden on society. Authorities are often forced to introduce expensive measures of dubious value in order to demonstrate that they are doing something to reduce this risk. Tom Ridge, America's Homeland Security Director has recently conceded that random checks of passengers in airports do little to bolster security.³⁵ Yet, such time costing rituals are seen to be necessary in order to contain the apprehensions of the public.

2.1 The problem of risk aversion

Risk management is primarily concerned with the intended and unintended consequences of change. Policies towards risk reduction and risk management are informed by cultural attitudes towards safety and loss avoidance. It is important to realise that Western – in particular Anglo-American – societies have a low threshold towards losses. In other words, the disposition of Anglo-American culture is relatively loss averse. That is one reason why it is uniquely vulnerable

to the risk of terrorism. A rich society with everything to lose regards risk differently to those who have little to forfeit by taking risks. As Professor Gerald Wilde, a risk psychology expert, notes the asymmetric threat with, at one extreme 'the September 11th terrorists were willing to sacrifice their lives,' whilst at the other, 'comfortable middle class North Americans demand a high level of perceived safety and security'.³⁶

It is widely recognised that contemporary society regards safety as an end in itself and tends to look upon failures in safety regimes as unacceptable. Consequently safety and the attitude of caution are now treated as inherently positive values across the entire political spectrum. According to today's ethos of safety, even the term 'accident' is now regarded as inconsistent with contemporary Western values. Public health officials often claim that most injuries suffered by people are preventable and that to attribute such an event to an accident is irresponsible. The American emergency medicine establishment has been in the forefront of the campaign to expunge the word 'accident' from its vocabulary. In a recent editorial, the *British Medical Journal* also declared that it has decided to ban the word accident from its pages.³⁷ It argued that since 'most injuries and their precipitating events are predictable and preventable' the word accident should not be used to refer to 'injuries or the events that produce them'. The editorial reluctantly acknowledges that some injury producing events may possibly be attributable to bad luck or acts of God. However, it claims that even in such cases – earthquakes or avalanches – prediction is often possible and therefore 'preventive steps can be taken by avoiding dangerous places at times of risk'. Western culture now finds it difficult to accept uncertainty, and has high expectations of the possibilities for extending risk assessment and risk management to cover many aspects of that which was previously thought to be the 'unknown' and the 'unpredictable'.

Difficulty in dealing with uncertainty is partly due to the great progress made by medicine and science over the centuries, as well as relative political and financial stability. In a culture of so

33 R. Bartholomew & S. Wessely, 'The protean nature of mass socio-genic illness: From possessed nuns to chemical and biological terrorism fears', *British Journal of Psychiatry*, 2000 (in press)

34 'Doomsday Talk', *Washington Post*, 7 October 2001

35 *Washington Post*, 23 April 2002

36 Cited in Dan Keegan, 'September 11th; an earthquake in risk perception', *Drivers.Com*, 17 October 2001

37 *BMJ*, 2001, p.1320

much knowledge and explanation, a chance occurrence is an affront to what we expect – the more so if it leads to injury. So, we always demand an explanation and look for guarantees of future safeguards or compensation.

Preoccupation with safety and the constant acknowledgement of vulnerability acts as an invitation for terrorist risk. As Homer-Dixon observes: ‘our increased vulnerability and our new found recognition of that vulnerability makes us more risk-averse, while terrorists have become more powerful and more tolerant of risk...[A]s a result, terrorists have significant leverage to hurt us.’³⁸ These different cultural attitudes have important implications for understanding risk in the post-September 11th setting.

Those involved in terrorist activity appear to take incalculably greater risk than their opponents do. This tendency assumes its most intense form in the case of suicide bombing. The willingness of some actors to adopt a 100% risk perspective has provoked incomprehension and confusion among many commentators. Consequently, such individuals are often described as desperate, irrational actors whose motives are beyond our comprehension. Yet, as Sprinzak (2000) argues, these individuals can be seen as ‘rational actors’ who are able to thrive in a climate where intentionally inflicted hazards provoke a sense of insecurity within a wider public. The threat posed by these individuals is underpinned by the different assumptions about risk taking. To put it brutally; ***Western assumptions towards risk are influenced by a one-dimensional concern with loss whereas those involved in terrorist action regard risk from the perspective of gain.***

Attitudes towards risk taking are fluid and reflect changing cultural values. Until recently, Anglo-American cultural norms accepted that that there were ‘good’ as well as ‘bad’ risks and that it was unreasonable to expect absolute safety. In recent decades, this neutral quality has given way to one where risk is by definition a problem and it is no longer conceptualised as the weighing up of positive and negative outcomes. Douglas (1990) has also drawn attention to the way in which perception of risk has changed

from an emphasis on risk as a probability to the present day concern with destructive outcomes. Renn (1997) argues that risks are often conceptualised as a random threat ‘that can trigger a disaster without prior notice and without sufficient time to cope with the hazard involved’. It is ‘randomness itself that evokes fear and avoidance responses’.³⁹ Risk aversion can be understood as reflecting profound uncertainties about change. Such uncertainties reinforce vulnerability towards the unknown and the unexpected. The fact that technological success is experienced as a point of vulnerability is explained by these ambiguities about managing change and risk.

Different cultural attitudes towards risk taking have a crucial bearing on the impact of the post-September 11th environment. It is not simply the case that some actors regard risk taking from the vantage point of an opportunity, the very risk averse culture of their target society may encourage them to exploit this difference in attitudes.

From the previous discussion it is evident that the management of intentional risk requires an approach that is different from conventional forms of calculations. Risk management is invariably confronted with the problem of uncertainty and the unknown, but this has been constrained by a clearer distinction about what is within the bounds of probability and therefore possibly subject to intervention. However, the fluid and reactive character of asymmetric threat necessarily intensifies the element of the unknown. According to Doug Morton, Chief Analyst at Lloyd’s, ‘the line between risk and uncertainty is starting to blur. Worst case scenarios did not include the aggregation of exposure on September 11th. So now people are more inclined to think the unthinkable, and this charges risk managers with the job of quantifying and containing their exposures to such previously unthinkable scenarios.’

Traditional evaluations of asymmetric threats pursue a technical approach and seek to analyse likely actors, their capabilities and the obstacles to their actions. The actors are understood as external to the threatened society, typically as of different ethnic group, background and ideology.

³⁸ Thomas Homer-Dixon, ‘The Rise of Complex Terrorism’, *Foreign Policy*, January-February 2002

³⁹ O. Renn, ‘Mental health, stress and risk perception: insights from psychological research’, CIBA Foundation – Symposium No.203, 1997, p.211

However, this approach is problematic in three ways:

1. *Unlike a technical process that can be subjected to a technical risk assessment, there is no static object to be measured. On the contrary, the very quality of this threat depends on the reactions it is likely to provoke. Since the dimension of this threat depends so much on the reaction it generates, the risk possesses a highly subjective character.*
2. *The objective of terrorist actions is typically to generate psychological damage through panic, fear leading to circumscription of certain behaviour and a weakening of risk-taking entrepreneurial enterprise. Thus the dimension of this threat also depends on the response of society and not simply on the capacities of the actor.*
3. *The loosening of the ties that bind individuals within society means that threats may now be posed by members of the threatened society as well as by those alien to it. Thus apprehensions towards intentional risk can be manipulated by a variety of actors pursuing diverse objectives, such as campaigns against particular corporations.*

Renn has convincingly argued that risk has both an objective and subjective character in that it 'reflects both real harm and social constructions'.⁴⁰ Since so much of an asymmetric threat is oriented towards inflicting psychological damage, the element of social construction is particularly significant. As noted previously, the risk of terrorism is inextricably linked up with the prevailing consciousness of vulnerability. Terrorists regard Western attitudes towards risk as an opportunity to exploit. They are oriented towards the promotion of public fear. That is why the prevailing culture of fear towards a variety of risks – health, environmental, technological, behavioural – can become hospitable to actors whose objective is to produce terror.⁴¹ As Shine noted 'terror arises from fear magnified by an exaggerated sense of risk, and perpetuated by misinformation and rumours.'⁴² That is why any coherent assessment of intentional risk needs to be informed by a clear grasp of the public response. An important part of the handling of intentional risk concerns the management of response and potential response, rather than managing the threat itself.

From the available evidence, it appears that the impact of the threat of terrorism is often psychological and that its power is significantly enhanced by the fears generated by a risk averse culture. That is why the objective of terrorist action is as much psychological disruption as physical destruction. This point is consistent with Swiss Re's definition of terrorism: 'an act or threat of violence or an act harmful to human life, tangible or intangible property or infrastructure with the intention or effect of coercing any government or putting the public or any segment of the public in fear.'⁴³

For this reason terrorist action is typically directed against symbols of the society rather than concrete goals. It is the capacity of such threats to engage with a central, cultural characteristic of our society – risk aversion – that gives it an asymmetric power, that is, disproportionate to the damage inflicted. In 'The Great Superterrorism Scare,' Ehud Sprinzak (1998) warned that the 'unprecedented fear of mass destruction terrorism' that spread amongst Western elites could have destabilising consequences: 'Not only are many of the countermeasures likely to be ineffective, but the level of rhetoric and funding devoted to fighting superterrorism may actually advance a potential superterrorist's broader goals: sapping the resources of the state and creating a climate of panic and fear that can amplify the impact of any terrorist act'.

It is interesting to note that the traditional anti-terrorist declarations from politicians, that terror will not be allowed to succeed in preventing us from going about our daily business, are less in evidence following the September 11th attacks. Instead, *there appears to be a tendency to embrace the idea of society under threat and treat it as a welcome organising principle for political and social life.* Businesses adopting risk averse measures, problems with insurance cover, and expensive reorganisation of economic life can also inadvertently have the effect of rewarding a terrorist act. Such attitudes towards risk taking may limit the choices open to policymakers. In contrast, terrorist actors prepared to take risks are able to experiment and innovate and enjoy a competitive advantage over their opponents.

⁴⁰ *ibid*, p.222

⁴¹ F. Furedi, Culture of Fear: risk-taking and the morality of low expectation, Cassell Continuum, 2002

⁴² Testimony of Kenneth I. Shine, MD, President, Institute of Medicine, The National Academies. For Hearing on 'Risk Communication: National Security and Public Health', Before the Congress of the United States House of Representatives, Subcommittee on National Security, Veterans' Affairs and International Relations Committee on Government Reform, 29 November 2001

⁴³ Swiss Re, *op cit*, p.16

3 Post-September 11th risk in perspective

Since September 11th, speculative risk has acquired a feverish character. Officials and experts have become preoccupied with the risks posed by weapons of mass destruction. The bio-terrorist appears to personify the risk of the future. The dramatic dimension of the destruction of the WTC has distracted many from the task of methodically gathering evidence, carefully ranking risks and elaborating safety measures appropriate to the risks we face.

It is important to realise that even after the experience of September 11th, the old risks still predominate – last year an earthquake in India and Pakistan was the biggest event in terms of casualties, leaving 15,500 people dead or missing. Throughout the year, 33,000 people were killed in disasters, of which the destruction of the World Trade Center caused 3,300 victims. While 3,300 is an horrendous number of casualties, it is worth noting that this does not figure in Swiss Re's table of the 40 most deadly catastrophes between 1970 and 2001.

The economic loss of September 11th is huge and the biggest so far from man-made causes. It far exceeds the previous costliest event – the explosion of the Piper Alpha oil rig in 1988, at \$3 billion in today's prices. However, in real money terms the property and business interruption losses from September 11th are likely to fall short of Hurricane Andrew, which hit Florida and the Bahamas in 1992, and which Swiss Re calls the 'most costly insurance loss ever'. In 2001, the insurance claims following Hurricane Andrew came in at \$20 billion, while the latest estimates for September 11th range from \$13.5 billion to \$19 billion. What will massively inflate the cost for the insurance industry from September 11th are the additional claims for life and liability insurance which could add up to anything between \$16 billion to \$39 billion. This is an unprecedented figure, and

reflects the relatively high earnings and extensive liability policies of the people and firms attacked. So these high figures reflect not simply the magnitude of the event but the high level of the losses suffered by a prosperous community.

What has changed is not so much the nature or scale of risk but the type of risk that preoccupies the public imagination. Intentional risk has captured the imagination and has endowed uncertainty with frightening qualities. Society has learned to accept and manage, albeit nervously, the risk of some accidents, even if this is done through confrontational means such as civil litigation. But it finds it much more difficult to respond to risks that are intentionally promoted in order to cause mass destruction. Learning to live with this risk and adopting measures that can minimise its disruption on everyday life is the challenge that lies ahead.

Yet the difficulty that society has in managing risks is not the direct outcome of September 11th. A day after the destruction of the WTC, a commentator predicted in the *Los Angeles Times* that the 'next big thing' would not be 'some new technological innovation or medical breakthrough' but 'is likely to be fear'.⁴⁴ However, fear has been a big thing a long time before this episode. For some time now, we have been gripped by panics about the environment, health and food scares, apprehensions about new technology and personal safety. Consequently, we overlook the fact that the biggest dangers facing us continue to be self inflicted mundane acts such as smoking and household accidents. Even before September 11th we regarded the future as a dangerous place to inhabit; the attack on the WTC served to confirm this sentiment.

The long term legacy of the experience of September 11th will be shaped by the way in which we learn to cope with our pre-existing

⁴⁴ 'Fear and fragility sound a wake-up call', *Los Angeles Times*, 12 September 2001

fear of uncertainty. Promoting a resilience led approach to risk is the crucial ingredient for containing the problem of intentional risk. Why? Because a focus on vulnerability provides an opportunity for those promoting intentional risks. Take our obsession with health. Homer-Dixon notes that one 'key vulnerability is our fear for our health; an attack that exploits this fear would foster widespread panic'.⁴⁵

Learning to accept intentional risk as a 'normal' risk faced by society is crucial for dealing with the problem of terrorism. As long as it is defined as 'exceptional', its consequences regarded as 'incalculable' and its effects represented in science-fiction terms, it will not be possible to deal with this threat. Such a perspective merely informs everyone about their vulnerability and says little about how they can gain resilience from engaging with the risk. Yet, the human imagination possesses a formidable capacity to engage and learn from the risks it faces.

Throughout history humanity has learnt from its setbacks and losses and has developed ways of systematically identifying, evaluating, selecting and implementing the options for reducing risk. This also has meant being clear about the uncertainties and living with them, rather than panicking that action ought to be taken when in fact action exacerbates the problem.

Even a terrible tragedy like the devastation of September 11th, if reflected upon in a measured way, provides an opportunity for gaining lessons about how to manage terrorist risks.

Furthermore, better awareness of the particular sequence of circumstances that preceded it shows that it is highly unlikely that attacks would be repeated in the same form. This is not least because, from the point of view of a secretive organisation, the increased suspicion about activities like erratically taken flying lessons, would threaten its security. Pursuing a similar project opens up terrorist groups to the risk of surveillance and full-scale exposure. The reaction of passengers and crew on a plane is also likely to be different and therefore an obstacle to pursuing the same plan of attack. Likewise, significant factors such as the lack of relevant foreign intelligence activity are already being addressed. Important lessons are also

emerging about the response to the attacks, such as the handling of the recent episode of anthrax-letter attacks, which showed this dreaded substance to be far more effective in inflicting mass fear than in causing large casualties.

Accepting intentional risk as normal should not be interpreted as a call for passivity or resignation to the inevitable. On the contrary, precisely because it is seen to be normal, it represents a call for taking measures that can reduce risks, but also for accepting rather than being stupefied by areas of uncertainty.

Containing the threat of terrorism requires that policymakers and communicators adopt an approach that is devoted towards helping the public learn to live with it. Experience indicates that this is easier said than done. Since an open society is vulnerable to serious loss of life from terrorist attacks, there are immense pressures for reacting to this threat with a vulnerability-led response and an overwhelming focus on security. However, such a response threatens to further inflate public anxiety. It can also contribute to creating a climate where those promoting intentional risk possess a psychological advantage. It is important to note that society can absorb occasional acts of terror but it can become easily disoriented if morale diminishes significantly.

Ultimately, managing terrorist risk depends on the consolidation of public trust, since society's resilience is underwritten by public and political determination to cope with adversity. Trust is inextricably linked to a sense of security regarding the affairs of everyday life, including the ability to take for granted the insurance and risk management sectors' abilities to weigh up and cover risks effectively, rather than being constantly confronted with the idea that even they cannot cope. Avoiding increasing the destructive impact of attacks, through an overreaction to intentional risk, is dependent on normalising it through compensating for the damage. Although at present there is no consensus about how to calculate terrorist risk, ***we need to be clear that such burdens can be shared by communities of risk.***

⁴⁵ Thomas Homer-Dixon, 'Feeding Frenzies', *Foreign Policy*, March-April 2002

After September 11th, some insurance coverage for terrorism was withdrawn by insurance companies on the grounds that they could not estimate the frequency or the magnitude of future terrorist losses. Although this step could have significant impact on economic life, 'because the insurers' withdrawal has been gradual, the extent of the potential economic consequences is still unclear'.⁴⁶ We should recognise that much of the current uncertainty about the financial impact of September 11th and the arrangements needed for society to carry risks is not as beyond comprehension as it first appears, and better information will emerge through the ongoing government and insurance investigations in the coming months.

However, it is evident that unless society develops a mechanism for sharing terrorist risk, the response will remain panic-struck and this in turn could severely disrupt the global economy. Moreover, since the line that divides terrorism from other forms of intentional risk is difficult to define, companies could experience intensifying levels of uncertainty about what faces them. In such circumstances, they are likely to adopt a defensive posture and avoid activities that place them in the spotlight or that could possibly make them targets. Articulating this concern and demonstrating it through cautious measures is an encouragement for hoaxes and further business disruption. The fearful mood provides a very effective tool that not only terrorists but anyone with a grudge or even mischievous intent can exploit. Arguably, it is no longer necessary to go to the trouble of hijacking planes when localised acts such as sending dangerous parcels can cause sections of industry and social infrastructure to come to a halt. In this sense, Western organisations are doing the 'work' of terrorists for them.

Government can play a valuable role in acting as insurer of last resort in limited circumstances and for temporary periods of time. However government intervention can also distract

companies and other public bodies from developing new instruments and measures for managing intentional risk. Government intervention risks turning intentional risk into a new form of moral hazard that is beyond the bounds of our response. Society and individual companies have already started to take steps to minimise losses from terrorist attacks. In the short run, the very existence of these new measures can intensify the public's perception of intentional risk. But through taking measures society can gradually develop a more realistic and objective measure of terrorist risk.

In some industries, for example airlines, there has been extensive discussion of setting up a mutual scheme – an insurance vehicle to be financed by the industry and reinsured by the government. Industry-wide or local mutual schemes have the advantage of concentrating the mind around the specifics of the risks confronting the stakeholders. It also provides a direct incentive for taking the steps necessary for reducing intentional risk, since members of the scheme have a common interest in minimising its cost. Such mutual schemes can play an invaluable role in sensitising its members about the scope of the risks they face.

What is required is a period of experimentation in which different insurance vehicles and risk management approaches are tested, in order to acquire the skills necessary to manage both the risks and the reactions to uncertainty. What is at issue is not simply the question of how to respond to the threat of terrorism but how to pool risks in a world where intentionally inflicted risks can lead to significant losses. It may be that the price of sharing risk will have to rise. But to argue that the new intentional risks we face are uninsurable is a recipe for paralysis and a waste of economic opportunities. Such a failure of imagination can, over time, exact a far heavier loss than that experienced during that terrible day on September 11th.

⁴⁶ 'Terrorism Insurance; Rising Uninsured Exposure Heightens Potential Economic Vulnerabilities', Statement of Richard J. Hillman, Director, Financial Markets and Community Investment, Testimony Before the Subcommittee on Oversight and Investigations, Committee on Financial Services, US House of Representatives, 27 February 2002, United States General Accounting Office, Washington DC, p.2

4 Responding to the discussion paper

Responses to this discussion paper are being sought, not only from risk managers, insurers and those industries affected by the risk of intentional acts of destruction, but also from policy bodies, government agencies and others with an interest in responding to this type of risk. The questions proposed for further consideration are:

1. *What are the new challenges for insurance and infrastructural projects posed by 'intentional risk', that is acts **intended** to cause disruption?*
2. *What are the 'lessons' of September 11th and what order of priority should be given to them in the insurance and risk management sectors?*
3. *How should the insurance industry engage with the climate of heightened aversion to risk?*
4. *Are responses to terrorist and other intentional risks uneven across Western economies, governments and corporations?*

5. *Do some attempts to manage intentional risk result in greater disruption and cost, thereby making such attacks more effective?*

6. *What are the limits of a risk management response?*

However, respondents should feel free to put forward brief or detailed comments on the main thesis and any of the issues raised in the paper, or indeed point out related issues and omissions.

Global Futures plans to publish a commentary on the discussions that follow this paper, together with selected responses, by agreement with the authors, in a further volume at the end of 2002. If you submit a response, please state whether it is private, to be attributed in future discussion or for publication and, if so, whether it is a draft or final copy. Please also indicate, in the case of organisations, whether responses are on behalf of the organisation or personal.

Send comments to riskresponse@futureproof.org or visit the Global Futures website at www.futureproof.org



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